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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,630	11/05/2003	Satoru Ishikawa	117682	4880
25944	7590	05/06/2005	EXAMINER	
OLIFF & BERRIDGE, PLC			CHEN, SOPHIA S	
P.O. BOX 19928			ART UNIT	
ALEXANDRIA, VA 22320			PAPER NUMBER	

2852

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/700,630

Applicant(s)

ISHIKAWA ET AL.

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1 and 13 is/are rejected.
7) ☒ Claim(s) 2-12 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/22/04 & 8/6/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawing was received on 4/22/04. This drawing is approved.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 37 (page 17, line 2). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 41a (Figure 1). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing

date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because the reference numeral "95" (CHARGING CIRCUIT) of Figure 2 should be labeled as "96". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
7. The disclosure is objected to because of the following informalities:
 - a. Page 13, line 1, "A" should be "L" (see Figure 1).
 - b. Page 16, line 1, "d veloping" should be "developing".
 - c. Page 25, line 14, "transfer roller 31" should be either "developing roller 31" or "transfer roller 30".

Appropriate correction is required.

Claim Objections

8. Claims 2-5 are objected to because of the following informalities: Claim 2, line 12, "b aring" should be "bearing". Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Sasaki (US Pat. No. 5,697,013).

The patent discloses an image forming device comprising: a photosensitive drum 20 rotatable in a predetermined direction about an axis and having a peripheral surface on which an electrostatic latent image is formed (column 8, lines 39-51); a driving unit (motor) 100; a drive signal generating unit that generates a drive signal to be applied to the driving unit 100, the driving unit 100 rotating the photosensitive drum 20 in response to the drive signal (Figure 22); a charging unit 21 that is disposed in confrontation with the photosensitive drum 20 and electrically charge the photosensitive drum 20 (column 8, lines 44-45); a charging bias applying unit 101 that applies a charging bias V_d to the charging unit 21 (column 10, lines 44-45 and Figures 5, 6 and 22); a developing agent bearing member 24 that is disposed in confrontation with the photosensitive drum 20 in a position further downstream than the charging unit 21 with respect to the predetermined direction in which the photosensitive drum 20 rotates (Figure 5), the developing agent bearing member 24 forming a developed image on the photosensitive drum 20 by applying developing agent on the electrostatic latent image on the photosensitive drum 20 (column 8, lines 61-65); a transfer unit 26 that is disposed in confrontation with the photosensitive drum 20 in a position further upstream than the charging unit 21 with respect to the predetermined direction but further downstream than the developing agent bearing member 24, the transfer unit 26 transferring the developed image on the photosensitive drum 20 onto a recording medium P (column 9, lines 17-19 and Figure 5); a control unit 110 that controls the charging bias applying unit

101 to terminate application of the charging bias V_d to the charging unit 21 at a time before rotations of the photosensitive drum 20 stops completely by interruption application of the drive signal from the drive signal generating unit to the driving unit 100 (Figure 22), and controls a potential between the photosensitive drum 20 and the developing agent bearing member 24 so that a lesser amount of the developing agent on the developing agent bearing member 24 adheres to the photosensitive drum 20 before the photosensitive drum 20 stops completely (column 17, line 67 to column 18, line 17; Figure 22); and the developing agent bearing member 24 collects the developing agent remaining on the photosensitive drum 20 after passing through the transfer unit 26 (column 3, lines 3-12; column 9, lines 3-6; column 10, lines 32-35).

Allowable Subject Matter

11. Claims 2-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Saito et al. (US Pat. No. 5,845,172) discloses a cleanerless image forming apparatus comprising a photosensitive drum; a drive unit; a charging unit; a charging bias applying unit; a developing agent bearing member; a transfer unit; and a control unit that control the charging bias applying unit to terminate application of the charging

bias to the charging unit at time before rotations of the photosensitive drum stops completely.

Katsumi et al. (US Pat. No. 6,157,794) discloses an image forming apparatus comprising a photosensitive drum; a drive unit; a charging unit; a charging bias applying unit; a developing agent bearing member; a transfer unit; and a control unit that control the charging bias applying unit to terminate application of the charging bias to the charging unit at time before rotations of the photosensitive drum stops completely.


Ito et al. (US Pat. Pub. No. US 2004/0005159 A1) discloses an image forming apparatus comprising a photosensitive drum; a drive unit; a charging unit; a charging bias applying unit; a developing agent bearing member; a transfer unit; and a control unit that control the charging bias applying unit to terminate application of the charging bias to the charging unit at time before rotations of the photosensitive drum stops completely, and controls a potential between the photosensitive drum and the developing agent bearing member before the photosensitive drum stop completely.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
May 3, 2005

approved (x) 5/2/05



FIG. 6

